



1
00:00:19,429 --> 00:00:16,870
apollo 13 was a team effort from the

2
00:00:21,990 --> 00:00:19,439
very beginning to the end

3
00:00:23,990 --> 00:00:22,000
okay you know we've had a problem here

4
00:00:28,470 --> 00:00:24,000
we've had a hardware race car i don't

5
00:00:32,709 --> 00:00:30,470
when the crew threw the switches

6
00:00:35,830 --> 00:00:32,719
to start the crowd stir a spark jump

7
00:00:36,630 --> 00:00:35,840
between the fan and the heater assembly

8
00:00:38,310 --> 00:00:36,640
and

9
00:00:40,790 --> 00:00:38,320
the pressure in that tank

10
00:00:43,190 --> 00:00:40,800
rose very rapidly because the insulation

11
00:00:46,069 --> 00:00:43,200
had been damaged on the system

12
00:00:49,510 --> 00:00:46,079
and we now had a fire inside the tank

13
00:00:52,790 --> 00:00:49,520

that blew the dome of the tank off

14

00:00:59,910 --> 00:00:52,800

that series of events started the saga

15

00:01:03,510 --> 00:01:01,830

and we had a pretty large bang

16

00:01:05,189 --> 00:01:03,520

associated with the

17

00:01:08,230 --> 00:01:05,199

caution and warning there

18

00:01:10,630 --> 00:01:08,240

the uh exact words i used in mission

19

00:01:12,390 --> 00:01:10,640

control is we have never lost an

20

00:01:13,990 --> 00:01:12,400

american in space

21

00:01:17,429 --> 00:01:14,000

and we sure as hell aren't going to lose

22

00:01:19,590 --> 00:01:17,439

when this crew is coming home

23

00:01:23,350 --> 00:01:19,600

you got to believe it your team must

24

00:01:24,830 --> 00:01:23,360

believe it and we must make it happen

25

00:01:25,109 --> 00:01:24,840

you're looking

26

00:01:27,910 --> 00:01:25,119

uh something when we suddenly realized

27

00:01:32,149 --> 00:01:29,990

the truth is significance

28

00:01:34,469 --> 00:01:32,159

of the explosion seeing the oxygen

29

00:01:35,990 --> 00:01:34,479

escape from the rear on my spacecraft

30

00:01:37,510 --> 00:01:36,000

and consequently losing all the

31

00:01:38,550 --> 00:01:37,520

electrical power and the propulsion

32

00:01:40,630 --> 00:01:38,560

system

33

00:01:42,230 --> 00:01:40,640

we knew we were in serious trouble have

34

00:01:43,590 --> 00:01:42,240

you called in your backup ecommerce now

35

00:01:45,350 --> 00:01:43,600

see if we can get some more brain power

36

00:01:48,389 --> 00:01:45,360

in this we've got one here raj

37

00:01:50,950 --> 00:01:48,399

throughout the entire apollo 13 mission

38

00:01:53,990 --> 00:01:50,960

the teams in mission control

39

00:01:55,830 --> 00:01:54,000

changed shifts almost regularly at eight

40

00:01:59,350 --> 00:01:55,840

hour intervals

41

00:02:01,990 --> 00:01:59,360

and the teams kept the mission going

42

00:02:04,310 --> 00:02:02,000

kept working the problem as my teams

43

00:02:06,069 --> 00:02:04,320

tried to come up with the answers

44

00:02:08,389 --> 00:02:06,079

go ahead i want you to get some guys

45

00:02:10,550 --> 00:02:08,399

figuring out minimum power in the limb

46

00:02:12,630 --> 00:02:10,560

to sustain life fortunately the lunar

47

00:02:14,550 --> 00:02:12,640

module was attached to us

48

00:02:15,670 --> 00:02:14,560

and when that occurred with oxygen

49

00:02:17,510 --> 00:02:15,680

almost

50

00:02:19,270 --> 00:02:17,520

gone in the command module

51
00:02:22,390 --> 00:02:19,280
we transferred the command to the lunar

52
00:02:24,949 --> 00:02:22,400
module and tried to use it somehow some

53
00:02:26,630 --> 00:02:24,959
way as a lifeboat to get home let's

54
00:02:29,510 --> 00:02:26,640
solve the problem but let's not make it

55
00:02:30,790 --> 00:02:29,520
any worse by guessing i got a lot of

56
00:02:32,869 --> 00:02:30,800
recognition

57
00:02:35,589 --> 00:02:32,879
for the work that we did but the real

58
00:02:37,350 --> 00:02:35,599
heroes of apollo 13 were the people in

59
00:02:39,670 --> 00:02:37,360
the back rooms and over in the

60
00:02:42,790 --> 00:02:39,680
engineering facilities who came up with

61
00:02:45,190 --> 00:02:42,800
the answers we needed we never

62
00:02:46,949 --> 00:02:45,200
talked among ourselves about not making

63
00:02:48,229 --> 00:02:46,959

it back home

64

00:02:50,710 --> 00:02:48,239

it was like

65

00:02:52,630 --> 00:02:50,720

playing a game of solitaire as long as

66

00:02:55,110 --> 00:02:52,640

we had a card and we could put it

67

00:02:57,509 --> 00:02:55,120

someplace the game kept going

68

00:02:59,830 --> 00:02:57,519

and every crisis that we came up to we

69

00:03:02,229 --> 00:02:59,840

found a solution as we rounded the moon

70

00:03:04,229 --> 00:03:02,239

and my two companions uh looked at the

71

00:03:05,910 --> 00:03:04,239

place where we were supposed to land and

72

00:03:06,710 --> 00:03:05,920

there were very much disappointment i

73

00:03:08,229 --> 00:03:06,720

said

74

00:03:11,350 --> 00:03:08,239

we're on our way home

75

00:03:13,990 --> 00:03:11,360

let's get home successfully and forget

76
00:03:16,229 --> 00:03:14,000
about the landing and there's one whole

77
00:03:18,470 --> 00:03:16,239
side of that

78
00:03:20,710 --> 00:03:18,480
is that right well the whole panel is

79
00:03:23,270 --> 00:03:20,720
blown out almost from the uh

80
00:03:25,030 --> 00:03:23,280
base to the uh it's just really a mess

81
00:03:26,789 --> 00:03:25,040
man that's unbelievable

82
00:03:29,589 --> 00:03:26,799
i'm just

83
00:03:30,830 --> 00:03:29,599
okay copy that

84
00:03:33,830 --> 00:03:30,840
farewell

85
00:03:34,949 --> 00:03:33,840
aquarius thank you apollo 13 has to rate

86
00:03:37,430 --> 00:03:34,959
with

87
00:03:39,589 --> 00:03:37,440
anything we ever do because it took

88
00:03:41,750 --> 00:03:39,599

a great deal of ingenuity

89

00:03:43,430 --> 00:03:41,760

a great deal of preparation years of

90

00:03:45,350 --> 00:03:43,440

preparation

91

00:03:47,589 --> 00:03:45,360

a lot of guts

92

00:03:50,229 --> 00:03:47,599

on the part of the astronauts themselves

93

00:03:53,470 --> 00:03:50,239

to bring that off

94

00:03:57,670 --> 00:03:53,480

odyssey houston standing by

95

00:04:05,589 --> 00:03:57,680

over 13 apollo 13 as there's a recovery

96

00:04:05,599 --> 00:04:15,670

look good

97

00:04:20,949 --> 00:04:17,830

and so you have to say that apollo 13

98

00:04:22,550 --> 00:04:20,959

was a fantastic moment in the history of

99

00:04:24,230 --> 00:04:22,560

manned space flight

100

00:04:25,990 --> 00:04:24,240

i will tell you that we had one of the

101
00:04:28,230 --> 00:04:26,000
most bodacious

102
00:04:51,430 --> 00:04:28,240
splashdown parties that i can remember

103
00:04:51,440 --> 00:05:18,710
looking great 20 feet

104
00:05:18,720 --> 00:05:37,270
shot here

105
00:05:41,990 --> 00:05:40,070
all right charlie such a form

106
00:05:43,909 --> 00:05:42,000
how about that

107
00:05:44,870 --> 00:05:43,919
i'm going out for a ballet when i get

108
00:05:47,350 --> 00:05:44,880
back

109
00:05:50,469 --> 00:05:47,360
you learn another line of work up here

110
00:05:52,790 --> 00:05:50,479
john you're just beautiful that is

111
00:05:54,469 --> 00:05:52,800
that is the most beautiful sight

112
00:05:56,390 --> 00:05:54,479
what's this you're standing there on a

113
00:06:00,710 --> 00:05:56,400

round of that crater oh god i've never

114

00:06:05,590 --> 00:06:03,430

well he's not real well

115

00:06:07,909 --> 00:06:05,600

actually he is on this thing i'll tell

116

00:06:12,629 --> 00:06:10,070

he's a big rooster tail out of all four

117

00:06:15,270 --> 00:06:12,639

wheels and as he turns he skids back in

118

00:06:16,230 --> 00:06:15,280

breaks loose just like on snow

119

00:06:29,189 --> 00:06:16,240

rod

120

00:06:32,550 --> 00:06:31,029

now i tell you i can't see to the bottom

121

00:06:35,830 --> 00:06:32,560

of it i'm as close to the edge as i'm

122

00:06:38,150 --> 00:06:35,840

going to get

123

00:06:40,469 --> 00:06:38,160

all the different steps

124

00:06:44,469 --> 00:06:40,479

and all the different pieces of hardware

125

00:06:47,670 --> 00:06:44,479

and all of it had to work

126

00:06:50,230 --> 00:06:47,680

and it's just inconceivable

127

00:06:52,309 --> 00:06:50,240

that we could do something like that the

128

00:06:53,270 --> 00:06:52,319

motivation was well it ain't gonna be my

129

00:06:54,790 --> 00:06:53,280

part that

130

00:06:55,830 --> 00:06:54,800

screws up you know i'm gonna get it

131

00:06:57,510 --> 00:06:55,840

right

132

00:06:59,749 --> 00:06:57,520

and apparently everybody else felt the

133

00:07:13,430 --> 00:06:59,759

same way and we did it and did it and

134

00:07:17,029 --> 00:07:15,830

apollo 17 was probably one of the more

135

00:07:18,870 --> 00:07:17,039

interesting

136

00:07:21,110 --> 00:07:18,880

missions because

137

00:07:23,189 --> 00:07:21,120

we had a real geologist

138

00:07:25,510 --> 00:07:23,199

there and they landed in a

139

00:07:30,070 --> 00:07:25,520

you know wonderfully interesting

140

00:07:33,909 --> 00:07:32,150

the valley of tourist litro was picked

141

00:07:36,629 --> 00:07:33,919

as a landing site for a couple different

142

00:07:39,270 --> 00:07:36,639

reasons uh number one it was in an area

143

00:07:41,909 --> 00:07:39,280

the moon we had never even come close to

144

00:07:43,670 --> 00:07:41,919

and it was a valley some 20 miles long

145

00:07:45,749 --> 00:07:43,680

and five miles across which was

146

00:07:50,390 --> 00:07:45,759

literally surrounded by mountains higher

147

00:07:54,469 --> 00:07:52,950

yeah 1.2 kilometers is a long way from

148

00:07:55,749 --> 00:07:54,479

the left look at the challenger down

149

00:07:57,189 --> 00:07:55,759

there

150

00:08:00,790 --> 00:07:57,199

they can get a feel for how big this

151
00:08:03,510 --> 00:08:00,800
valley really is i'd rather not

152
00:08:06,869 --> 00:08:03,520
holy smolly

153
00:08:15,189 --> 00:08:08,230
no

154
00:08:19,589 --> 00:08:17,749
we stopped uh obviously at uh a lot of

155
00:08:21,270 --> 00:08:19,599
different plan places and we did

156
00:08:23,110 --> 00:08:21,280
everything from drilling core samples to

157
00:08:27,189 --> 00:08:23,120
center experiments to drilling trenches

158
00:08:29,350 --> 00:08:27,199
and so forth there is orange soil well

159
00:08:30,790 --> 00:08:29,360
don't move it till i see it

160
00:08:31,670 --> 00:08:30,800
and i thought

161
00:08:33,430 --> 00:08:31,680
okay

162
00:08:35,269 --> 00:08:33,440
this scientist has been on the moon too

163
00:08:37,190 --> 00:08:35,279

long he's been he's been breathing too

164

00:08:39,750 --> 00:08:37,200

much oxygen there's not going to be any

165

00:08:41,990 --> 00:08:39,760

orange soil hey it is i can see it from

166

00:08:43,509 --> 00:08:42,000

here it's orange

167

00:08:45,829 --> 00:08:43,519

we not only did a lot of work on the

168

00:08:47,509 --> 00:08:45,839

moon but we had a good time

169

00:08:53,590 --> 00:08:47,519

and you know you're only going to come

170

00:08:58,790 --> 00:08:57,030

in may every month of december

171

00:09:01,030 --> 00:08:58,800

may bay

172

00:09:03,110 --> 00:09:01,040

i just looked around and no one we were

173

00:09:03,829 --> 00:09:03,120

leaving no we weren't coming back and i

174

00:09:07,110 --> 00:09:03,839

uh

175

00:09:08,790 --> 00:09:07,120

i said we now leave as we once came

176

00:09:11,509 --> 00:09:08,800

and god willing

177

00:09:12,870 --> 00:09:11,519

as we shall return this valley of

178

00:09:15,670 --> 00:09:12,880

history has

179

00:09:18,230 --> 00:09:15,680

seen mankind complete its first

180

00:09:20,550 --> 00:09:18,240

evolutionary steps into the universe

181

00:09:22,790 --> 00:09:20,560

leaving the planet earth and going

182

00:09:25,670 --> 00:09:22,800

forward into the universe no more

183

00:09:35,269 --> 00:09:25,680

significant contribution as apollo made